

WHAT IS CLAIMED IS:

1. A nitride-based semiconductor light-emitting device comprising:
a GaN-based substrate; and
a semiconductor stacked-layer structure including a plurality of
nitride-based semiconductor layers grown on said GaN-based substrate by
vapor phase deposition,

said GaN-based substrate having an interface region contacting said
semiconductor stacked-layer structure and said interface region containing
oxygen atoms at concentration n in the range of $2 \times 10^{16} \leq n \leq 10^{22} \text{ cm}^{-3}$.

2. The nitride-based semiconductor light-emitting device according
to claim 1, wherein
said GaN-based substrate contains chlorine.

3. The nitride-based semiconductor light-emitting device according
to claim 1, wherein
said GaN-based substrate contains oxygen.

4. The nitride-based semiconductor light-emitting device according
to claim 1, wherein
said plurality of nitride-based semiconductor layers included in said
semiconductor stacked-layer structure include a layer contacting said GaN-
based substrate, and said layer contacting said GaN-based substrate
contains oxygen.